



Oslo, 13th. June 2003

Report on the long term outlook of the VLGC market.

ViaMar AS¹ is an independent shipping market analyst company that works with the tanker, bulker, container and gas shipping market developments. ViaMar develops multiclient studies of each of these markets, and the findings and conclusions referred to in this short report is based on excerpts from their recent study **The Market Outlook for Ships in Trade with LPG and Petrochemical Gases for the period 2003 – 2006/7**². For periods beyond the scope of this report, different scenarios have been used in the approach.

A basic element in the ViaMar approach to explain how charter rates develop in shipping markets is found in the estimation of the utilisation rate of the fleet. With this expression we refer to what degree the current fleet at any given time is in demand. A low utilisation rate corresponds to high overcapacity and will normally give low charter rates. We say the charter rates are a function of the utilisation rates.

If we look in to the first part of the outlook period (up to years 2006/7) we think that it is possible to identify some major trends in the development:

World Economy.

Following slow economic growth in the US, Europe and Japan in 2001-02, we think that the US economy will show signs of renewed strength by the 3rd. and 4th. quarter of 2003. Annual GDP growth in the US for 2003 is estimated at 2,6%. The Eurozone has trailed behind the US growth rates at 1,5%-point, and will likely see modest growth also in 2003. Non-Japan Asia has seen positive growth at 4% p.a., and even the Japanese economy has seen some positive growth. For 2004 – 2006 consensus seems to be that world economy will come into a period of sustained growth with rates between 2-3% p.a.

Fleet development.

There are a number of significant developments that can be seen from the likely development of the world fully refrigerated LPG fleet.

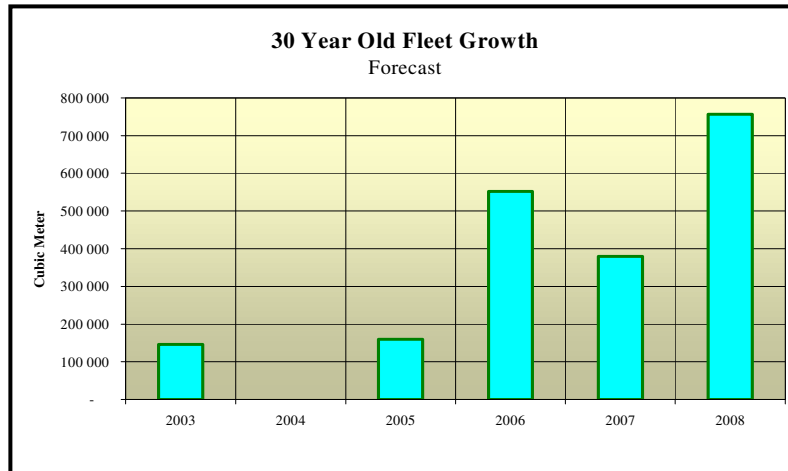
As appears from the below graph, the number of ships that will come into the “age of scrapping” is quite alarming, at least when we come to 2006-08. However, we may see some additional scrapping already in 2005 compared to the graph, as some ships are likely to be faced out earlier than at the age of 30 years.

¹ A presentation of ViaMar AS can be found on www.viamar.no

² This report was finalised in April 2003. ViaMar concludes two such reports each year, the first one in April/May and the second one in September/October.



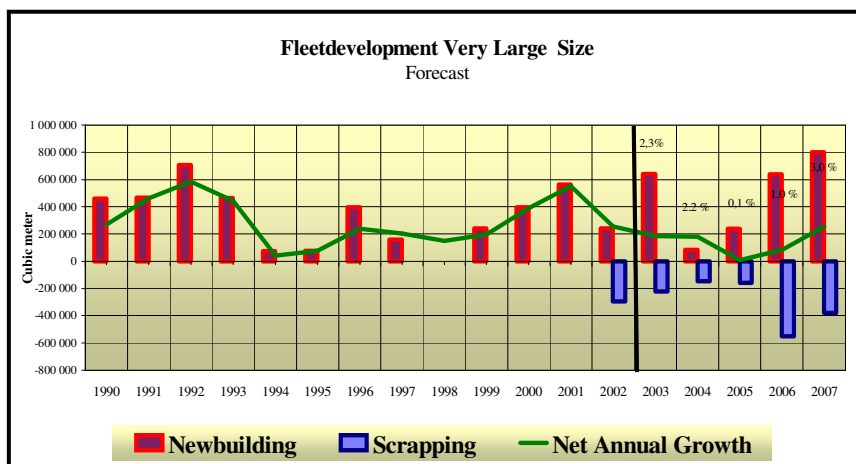
In 2006, an estimated 550.000 cbm will reach the age of 30 years. This represents 7 vessels. Another 5 vessels with 380.000 cbm will reach 30 years of age in 2007, and in 2008, 10 more vessels with 760.000 cbm will become obsolete because of age.



Scrapping in 2003 – 05 is however likely to be modest in this size group. A firm market and relatively few ships coming in to the “age of scrapping” will see to that. Over the period 2003 – 2008, approx. 24 ships are likely to be faced out of active trading. This represents approx 24% of the current fleet. 24% of the fleet leaving over 20% of the expected lifetime is likely to have some impact on the market balance.

If we look back to previous periods, the growth in the supply side of VLGCs has varied much over the years. During the period 1990-2002 average delivery was 326.000 cbm, or 4,2 vessels each of 78.000 cbm. A peak was seen in 1992 with 9 new ships delivered adding 705.000 cbm to world fleet.

A low was seen in 1998 with no additions to the fleet. Scrapping picked up in 2002 with more than 290.000 cbm scrapped. As shown in the graph, we think the scrapping will be modest in 2003 – 05, but shoot up in 2006 and 2007. Ordering of new ships for delivery in 2006 and 07 is highly likely to increase. We have estimated that 8 ships will be ordered for 06 delivery and a further 10 ships for delivery in 2007. Despite this, the fleet growth will only be 1% in 2006

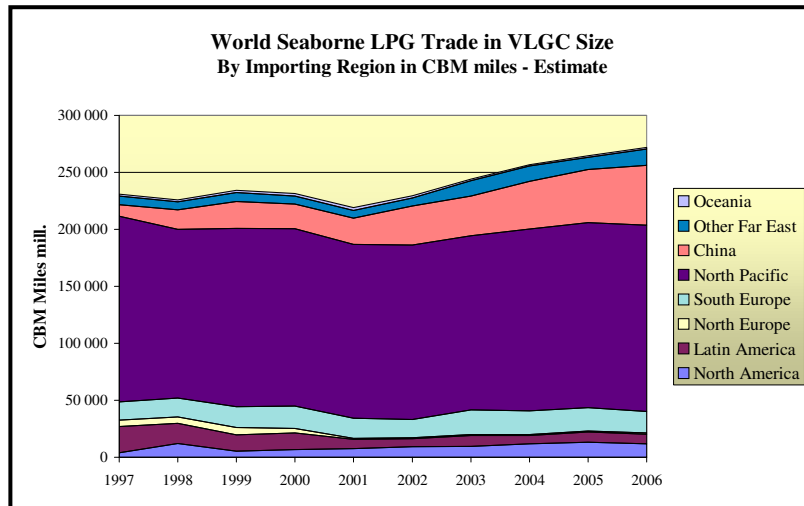




and 3 % in 2007.

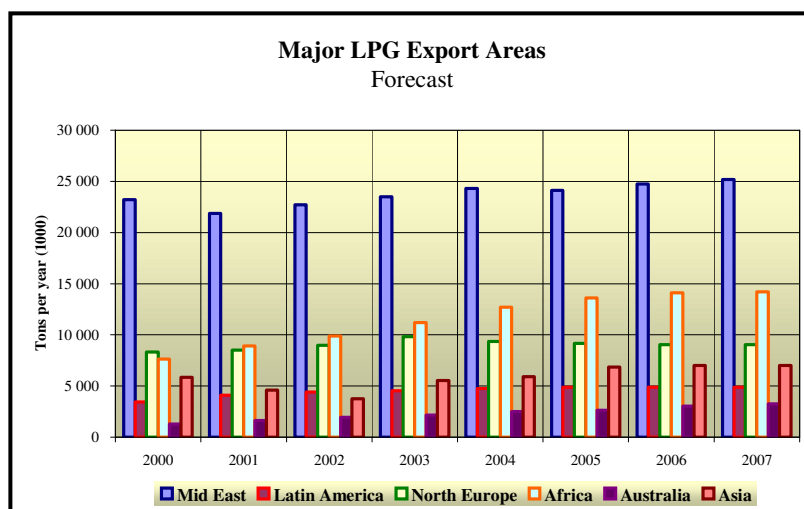
Demand side.

ViaMar estimate that world demand for seaborne transportation of LPG will grow with an average of 4,8% p.a. for the period 2003-2006.



China, India and Latin America will see the highest growth rates in imports and intra regional trade. Chinese imports are expected to reach 9 mill tons in 2006, up from 6,2 mill tons in 2002. Trade to North Pacific (Japan and Korea), which represented approx. 52% of world seaborne imports measured in cbm/miles in 2002, and thus by far is the largest single trade, will probably reduce its importance to 47% of total trade.

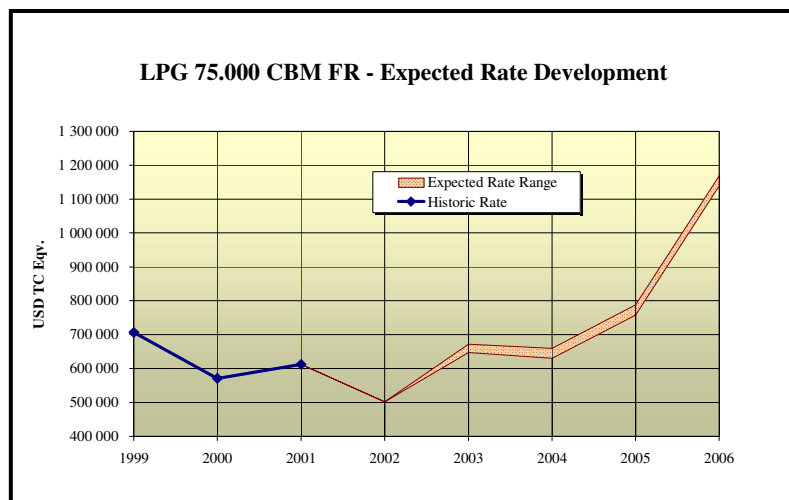
We have based our findings on the following volumes of LPG from the leading exporters:





Market balance

With continued positive growth in major economies in the world, and a steady increase in the availability of LPG from new production sites in North- and West-Africa, Latin America, North Sea, Middle East, Asia and Australia, we believe that there will be a growth in demand for seaborne transportation of LPG in the period up to 2006/07. The growth rate is estimated to reach 4,8 % p.a. for the period 2003 – 2006 on average. The supply side of shipping, namely the VLGC fleet, is however likely to see a much lesser growth rate. As we move into 2004 and 05, the growth rate for the supply side is likely to fall under 2%, and may, as we have indicated earlier even be negative. It is likely that this will have a tightening effect on shipping market charter rates. As indicated in the below graph, we estimate that the charter rates may reach a peak level by 2006, substantially up from the levels of 2002 – 2004.



Period beyond 2006/07

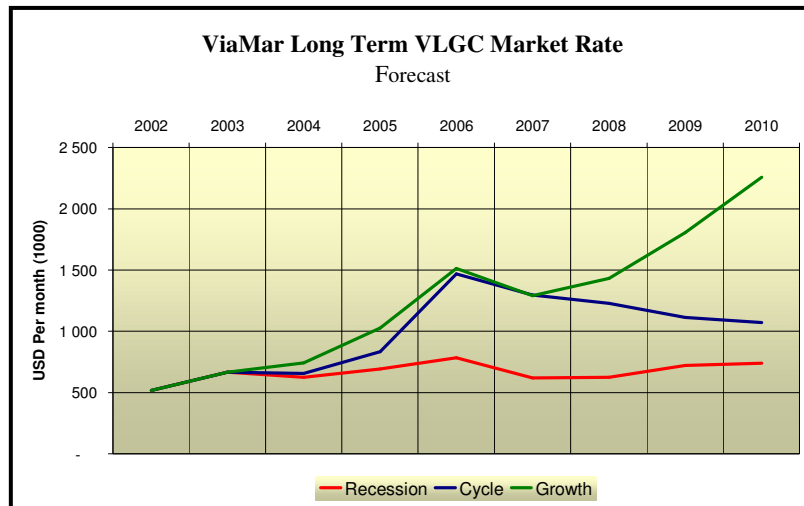
Looking beyond the period covered by our analysis, we have to base our approach on some specific scenarios. The scenarios have to include assumptions for the development of economy, trade and fleet development. As indicated such an exercise becomes very subjective.

We have defined three different scenarios:

- The continued growth scenario; The world economies continue to grow at a rate of 2 – 3% p.a.. LPG demand will continue to grow at 3-5% p.a. Up to 2005, 12 new ships come in to the market. From 2006-10, another 39 newbuildings will be delivered. Scrapping will take place when ships become 30 years old. For the period 2003 – 10, 35 ships will be scrapped. A top will be seen in 2008 when 10 vessels are faced out of the market.
- The cycle scenario; World economic growth will develop in cycles, and after a period of growth from 2003-2006/7, growth in 2008/9 will be dismal and some regions may even see a recession. In 2010 new growth will occur. LPG demand growth will follow economic growth. Fleet supply will be as per “ The continued growth scenario”.
- The recession scenario; world economic growth tumbles and vital areas continue to show no growth or even recession. World LPG demand growth falls back to a 0 – 1% growth rate. Up to 2005 supply side will develop as per the above scenarios. Meagre outlook will however cause fewer orders for newbuildings to be placed for the period 2006 – 10. We have estimated the number to 33 vessels.



The consequences for likely development of market charter rates each different scenario is shown in the below graph.



As indicated, the market heads for a firm period towards the end of the decade in both the “growth” and in the “cycle” scenarios. Only in the “recession” scenario will the fleet utilisation rates remain in the low 80% range, and consequently give little support for significant higher earnings.

On a subjective basis we would put a higher probability for the “cycle” scenario, which in any case will resemble the past experience. A continued “growth” scenario seems on the other side highly unlikely.

The above report is a short analysis of the current outlook. The conclusions indicate a quite dramatic development ahead. It is recommended that a deeper and more thorough analysis is carried out in order to bring more clarity about likely developments. ViaMar AS has the capacity to assist our clients with this work, and will be glad to give further support in this vital process.

Kind regards
for ViaMar AS

Reidar Sundvor
Senior partner

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